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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/749,753

12/30/2003

Yun Ling

42P17088

9077

8791

7590

01/05/2005

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EXAMINER

NGUYEN, KHIEM M

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 01/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/749,753	Applicant(s) LING ET AL.	
	Examiner Khiem Nguyen	Art Unit 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kosmala (6,007,359) in view of Hayashi et al. (6,139,360).

Kosmala discloses an internal cable assembly comprising a shielded cable connector 30 located on one end of a cable assembly; edge fingers 22 located directly on a system board 14. Wherein, the cable connector connects to the edge fingers on the system board. It is noted that Kosmala lacks to show a cable assembly with cable connectors located on either ends of the cable assembly. Hayashi et al. discloses that it is known to provide cable assemblies 140 and 150 provided with cable connectors located on either ends of the cable assemblies. Therefore, it would have been obvious for one of ordinary skill to provide a cable assembly with cable connectors located on either ends of the cable assembly for Kosmala's cable assembly in view of the teachings of Hayashi et al. The above feature would allow Kosmala's cable assembly to be connectable to multiple circuit boards simultaneously.

Art Unit: 2839

For claims 2-3, either Kosmala or Hayashi et al. shows that it is known to use system boards. It would have been obvious to utilize the disclosed system boards either as a motherboard or a daughter card since such system boards are old and well known in the art.

For claim 4, the shielded cable connector of Kosmala includes spring members 32 and 50 stamped and formed on the cable connector.

For claim 5, the edge fingers of Kosmala include ground connections 110 and contacts 20.

For claim 6, the ground connections 110 of Kosmala are electrically connected to the spring members 50 of the shielded cable connector. For claim 7, the ground connections 110 extend beyond the contacts 20 in the edge fingers (see figure 1 of Kosmala).

3. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied in claim 6 above, and further in view of Kendall et al. (4,736,275).

4. Kosmala in view of Hayashi et al. disclose an internal cable assembly comprising shielded cable connectors located on either ends of the cable assembly; edge fingers 22 located directly on a system board 14. Wherein, the cable connector connects to the edge fingers on the system board. For claim 8, it is noted that Kosmala lacks to show his ground connections 110 are connected to ground through vias located on the ground connections. Kendall discloses that it is known to connect his ground connections 99 to ground through vias 93 located on the ground connections.

Therefore, it would have been obvious for one of ordinary skill in the art to connect the

Art Unit: 2839

ground connections 110 of Kosmala to ground through vias located on the ground connections in view of the teachings of Kendall et al. The use of vias for connections to ground would provide a more reliable connection to the system board.

5. Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied in claim 1 above, and further in view of Ammon et al. (4,572,604).

6. Kosmala in view of Hayashi et al. disclose an internal cable assembly comprising shielded cable connectors located on either ends of the cable assembly; edge fingers 22 located directly on a system board 14. Wherein, the cable connector connects to the edge fingers on the system board. Kosmala lacks a board header includes contact pads, which connect to the cable assembly and a solder tail, which connects the board header to the system board. Ammon et al. discloses a board header 16 includes contact pads 36 which can connect to a cable assembly (not shown, see abstract) and a solder tail 36, which connects the board header to the system board 10 (column 5, lines 15-22).

Therefore, it would have been obvious for one of ordinary skilled in the art to provide a board header includes contact pads which connect to the cable assembly and a solder tail which connects the board header to the system board for the cable assembly of Kosmala in view of the teachings of Ammon et al. The use of a board header would prevent damage to the system board's edge fingers, since the electrical connection of the system board's edge fingers with a mating connector is through the board header.


Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Maston et al. (4,695,112) and Yatskov et al. (6,336,816) are further cited to show printed circuit boards with edge board connectors therefor. Tang (6,776,658) is further cited to show an electrical cable end connector.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khiem Nguyen whose telephone number is 571 272-2096. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571 272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Khiem Nguyen
Primary Examiner
Art Unit 2839